

# MEMS Analogue Submersible Tilt Meter

Designed to measure tilt on submerged structures either on a vertical, inclined or horizontal surface. Highly accurate MEMS sensors are mounted in robust watertight stainless steel housing which can be attached to the structure by bolting, bonding or welding



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## Overview



Geosense® Submersible Tilt Meters are designed to measure tilt on submerged structures either on a vertical, inclined or horizontal surface.

They consist of highly accurate MEMS sensors mounted in robust watertight stainless steel housing which can be attached to the structure by bolting, bonding or welding.

Each unit is individually calibrated to provide the ultimate in system accuracy and repeatability and can be used in conjunction with a hand held readout, automatic data acquisition system and Wi-SOS to provide a wireless monitoring solution.

### APPLICATIONS

Monitoring of tilt in submerged structures:

Inclined concrete faced dams

Retaining walls

Bridge piers

Dock walls

Piles

Off-shore structures

Submerged pipelines

Bridge piers

### FEATURES

Robust construction, suitable for long-term, high-pressure underwater situations

Can be mounted on inclined, vertical

Analogue output

High accuracy and repeatability

Watertight performance



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## Specifications

MODELS	SUTM-M 15-1-420	SUTM-M 15-2-420
Range	±15°	±15°
Axis	Uniaxial	Biaxial
Signal Output	4-20mA	4-20mA
Accuracy <sup>1</sup>	±0.005° ±18 arc sec ±0.1mm/m ±0.017% FS	±0.005° ±18 arc sec ±0.01mm/m ±0.017% FS
Resolution	0.0019° 7 arc sec 0.033 mm/m 0.007% FS	0.0019° 7 arc sec 0.033 mm/m 0.007% FS
Repeatability	±0.002° ±7.2 arc sec ±0.03 mm/m ±0.007% FS	±0.002° ±7.2 arc sec ±0.034 mm/m ±0.007% FS
Operating Temperature	-40 to +85°C	-40 to +85°C
<b>ELECTRICAL</b>		
Sensor	MEMS	
Excitation	8-15VDC	
<b>PHYSICAL</b>		
Protection	IP68	
Dimensions	152 x 36mm	
Weight	3kg	
<b>MATERIALS</b>		
Sensor enclosure	316 Stainless Steel	
<b>EXTENSION CABLE<sup>2</sup></b> (If required, to extend to data logger)		
Cable	Type 800 Multi-core with Braid	

<sup>1</sup> Readout dependent

<sup>2</sup> Please note, voltage output will be affected by cable length



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